

# NIS (H-42): sc-134515

## BACKGROUND

The sodium/iodide symporter (NIS) is an integral plasma membrane glycoprotein that mediates active iodide transport in the thyroid and other tissues, including salivary glands, gastric mucosa and lactating mammary gland. In the lactating mammary gland, NIS transports iodide into the milk, thereby allowing the nursing newborn to use the iodide for thyroid hormone biosynthesis. NIS is expressed in some breast cancers, but exhibits decreased expression in the majority of thyroid cancers, most likely due to alterations in the binding activity of AP2 and Sp1 transcription factors to the NIS promoter. NIS is a prerequisite for radioiodide treatment of thyroid cancer and a promising diagnostic and therapeutic tool for breast cancer.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SLC5A5 (human) mapping to 19p13.11; Slc5a5 (mouse) mapping to 8 B3.3.

## SOURCE

NIS (H-42) is a rabbit polyclonal antibody raised against amino acids 11-52 mapping near the N-terminus of NIS of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NIS (H-42) is recommended for detection of NIS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NIS (H-42) is also recommended for detection of NIS in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for NIS siRNA (h): sc-61199, NIS siRNA (m): sc-61200, NIS shRNA Plasmid (h): sc-61199-SH, NIS shRNA Plasmid (m): sc-61200-SH, NIS shRNA (h) Lentiviral Particles: sc-61199-V and NIS shRNA (m) Lentiviral Particles: sc-61200-V.

Molecular Weight of nonglycosylated NIS: 50 kDa.

Molecular Weight of glycosylated NIS: 87-110 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **NIS (G-5): sc-514487**, our highly recommended monoclonal alternative to NIS (H-42).